AMENDMENTS TO CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A voice over internet protocol device capable of auto-selectively dialing up a public switched telephone network or an internet phone, said voice over internet protocol device comprising:

at least one line transfer switch, which connects with a terminal apparatus to receive a voice signal produced by said terminal apparatus;

a control circuit, which is used to control each component in the entire device, and proceeds with packet processing for the signal received to produce a corresponding internet protocol packet;

wherein the at least one subscriber line interface circuit is connected to said at least one line transfer switch and to said control circuit to transform the voice signal transmitted from said terminal apparatus to a digital signal and then to transmit the digital signal to the control circuit to proceed with packet processing in order to carry out an internet telephone call by transmitting the internet protocol packet via the internet to the internet phone,

wherein, in case a power supply failure is detected, the control circuit ~~connecting with~~ is connected to the line transfer switch to produce a trigger signal that causes the at least one line transfer switch to transfer a voice signal produced by said terminal apparatus from said at least one subscriber line interface circuit to said public switched telephone network, to thereby carry out voice communications over the public switched telephone network until power is restored ~~when a power supply failure is detected, wherein the at least one subscriber line interface circuit is connected to said at least one line transfer switch and to said control circuit and arranged to transform the voice signal transmitted from said terminal apparatus to a digital signal, and then transmit the digital signal to the control circuit to proceed with packet processing~~;

a rectifier, which connects with said control circuit to supply said control circuit with power required for its normal operation;

at least one phone detection circuit, which is connected with said at least one line transfer switch and said control circuit to detect an employment status of said terminal apparatus;

a ringing detection circuit, which is connected with said at least one line transfer switch and a loop to detect an in-coming call ringing signal transmitted from the public switched telephone network through said loop, wherein when said in-coming call ringing signal is detected, according to the employment status of said terminal apparatus detected by said at least one phone detection circuit, said control circuit supplies an in-coming call transfer signal to cause said at least one line transfer switch to connect said terminal apparatus with said loop to receive said ringing signal when the employment status of said terminal apparatus is that the terminal apparatus is unused, and when said terminal apparatus is picked up, to enable communication with a remote terminal apparatus to proceed through said public switched telephone network.

2. (Previously Presented) The voice over internet protocol device capable of auto-selectively dialing up a public switched telephone network or an internet phone according to Claim 1, wherein there are a plurality of signal contacts equipped on said line transfer switch, wherein a first signal contact connects with said terminal apparatus, and a second signal contact connects with said subscriber line interface circuit, such that while said control circuit is in a normal power supply status, a trigger signal is produced to make said first and second signal contacts maintain an electric connection status.

3. (Previously Presented) The voice over internet protocol device capable of auto-selectively dialing up a public switched telephone network or an internet phone according to Claim 2, wherein there is a third signal contact equipped on said line transfer switch, said third signal contact connecting with said public switched telephone network through said loop, such that while the power supply for said control circuit is broken, said trigger signal causes said first and second signal contacts to be in an open status, and causes said third signal contact to be transferred to an electric connection status with said first signal contact.

4. (Previously Presented) A processing method for a voice over internet protocol device capable of auto-selectively dialing up a public switched telephone network or an internet phone, comprising the steps of:

causing a line transfer switch to connect a subscriber line interface circuit with at least one terminal apparatus, said subscriber line interface circuit being arranged to transform a voice signal transmitted from said terminal apparatus into a digital signal and to transform a digital signal received from a control circuit into an in-coming voice signal;

placing said voice over internet protocol device in a preset operation mode;

detecting an in-coming call ringing signal transmitted from said public switched telephone network upon detection of an in-coming call ringing signal transmitted from the public switched telephone network, checking an employment status of at least one said terminal apparatus connected with said voice over internet protocol device;

if at least one said terminal apparatus is unused, causing said line transfer switch to disconnect the unused terminal apparatus from the subscriber line interface and connect the unused terminal apparatus to a loop which is connected with said public switched telephone network, thereby disconnecting the terminal apparatus from the internet and transferring said in-coming ring signal from said public switched telephone network to said unused terminal apparatus.

5. (Previously Presented) The processing method for the voice over internet protocol device capable of auto-selectively dialing up a public switched telephone network or an internet phone according to Claim 4, wherein when the ringing signal disappears and said terminal apparatus is in unused status again, said voice over internet protocol device causes said terminal apparatus to be transferred back to a connection with said subscriber line interface circuit to re-connect said terminal apparatus with the internet through said subscriber line interface circuit.

6. (Currently Amended) The processing method for the voice over internet protocol device capable of auto-selectively dialing up a public switched telephone network or an internet phone

according to Claim 5, wherein said voice over internet protocol device detects a phone number dialed in said terminal apparatus to judge that the phone corresponding to said phone number dialed in said terminal apparatus belongs to ~~a~~ the public switched telephone network or ~~an~~ the internet phone, such that said voice over internet protocol device selectively transfers said terminal apparatus between a status which connects said terminal apparatus with said loop and a status which connects said terminal apparatus with said subscriber line interface circuit depending on whether said phone number dialed in said terminal apparatus is a phone number of a phone on the public switched telephone network or ~~an~~ the internet phone.

7. (Previously Presented) The processing method for the voice over internet protocol device capable of auto-selectively dialing up a public switched telephone network or an internet phone according to Claim 4, further comprising the step of, when a power supply failure is detected, causing the line transfer switch to transfer a voice signal produced by said terminal apparatus from said subscriber line interface circuit to said public switched telephone network, thereby enabling communications with a remote phone that were originally carried out over the internet to continue over the public switched telephone network despite an interruption in a supply of power to said voice over internet protocol device.